

**IN THE CLAIMS:**

**The following claims are pending in the present application.**

1-14. (Cancelled)

15. (Previously presented) An infrared ("IR") thermography imaging system comprising:

at least one flash lamp configured to heat a surface of an object to be imaged;

at least one active quenching means configured to quench said at least one flash lamp to control a duration of a flash, wherein said active quenching means is configured to receive a control signal T2 and to quench said flash lamp in response to the control signal T2;

a timing generator configured to supply the control signal T2; and

an IR camera configured to capture a plurality of IR image frames of the object.

16. (Previously presented) The IR thermography imaging system of Claim 15, wherein said active quenching means is further configured to receive an initial control signal T0, wherein said active quenching means is further configured to allow a current flow I to said flash lamp in response to the initial control signal T0, and wherein the timing generator is further configured to supply the initial control signal T0.

17. (Previously presented) The IR thermography imaging system of Claim 16, wherein said active quenching means comprises a switch, wherein said switch closes in response to the initial control signal T0 and opens in response to the control signal T2.

18. (Previously presented) The IR thermography imaging system of Claim 17, wherein the timing generator is further configured to supply a lamp trigger signal T1, and wherein said flash lamp is activated in response to the lamp trigger signal T1.

19. (Original) The IR thermography imaging system of Claim 16, wherein said active quenching means further comprises a switch drive circuit configured to receive a logic level signal and to generate a switch-drive signal in response, wherein the control signal T2 is a logic level signal, and wherein said high-voltage, high current switch opens in response to the switch-drive signal that corresponds to the control signal T2.

20. (Original) The IR thermography imaging system of Claim 19, wherein the switch-drive signal is a switch-drive voltage signal.

21. (Previously presented) The IR thermography imaging system of Claim 17, wherein said switch comprises a power semiconductor switch.

22. (Previously presented) The IR thermography imaging system of Claim 17, wherein said switch comprises an insulated gate bipolar transistor.

23-27. (Cancelled)

28. (Previously presented) The IR thermography imaging system of Claim 21, wherein the power semiconductor switch is selected from the group consisting of a silicon controlled rectifier, a gate turn-on thyristor, a MOSFET, a insulated gate commutated thyristor ("IGCT"), and combinations thereof.

29. (Cancelled)

30. (Previously presented) An infrared ("IR") thermography imaging system comprising:

at least one flash lamp configured to heat a surface of an object to be imaged;

at least one active quenching means configured to quench said at least one flash lamp to control a duration of a flash, wherein said active quenching means is configured to receive a control signal T2 and to quench said flash lamp in response to the control signal T2

a timing generator configured to supply the control signal T2; and

an IR camera configured to capture a plurality of IR image frames of the object, wherein said active quenching means is a switch, wherein said switch opens in response to the control signal T2.